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The Islay.

ONE of the natural divisions into which botanists divide the great genus Prunus is distinguished by the evergreen foliage of the species referred to it, which, unlike other plants of the genus, produce their flowers in racemes developed from the axils of the leaves of the previous year, and yield fruit with very thin flesh and large thin-walled smooth rugose or reticulate-veined stones. To this group is given the name Laurocerasus, an ante-Linnæan name of the typical plant of the section, and its Linnæan specific name. Laurocerasus is a tropical and sub-tropical group, and is more widely scattered over the surface of the earth than any other of the natural divisions of the genus. It is largely represented in the Indian Archipelago and in South America; it occurs in southern China and Japan, in India, in the West Indies and Mexico, while in the United States three species are found. Of these one, an inhabitant of Brazil and the West Indies, finds its northern home on the shores of Bay Biscayne in Florida; the second is distributed through the maritime regions of the southern states, and the third is Californian.

To gardeners, the most familiar plant of the group is the so-called English Laurel, Prunus Laurocerasus, the type of the section and a native of the Orient, whence it was brought two centuries ago into European gardens, which it has done, perhaps, as much to decorate as any other plant. As a garden-plant the narrow-leaved Portugal Laurel, Prunus Lusitanica, a native of south-western Europe and the north African islands, among broad-leaved evergreens, is only second in popularity to the English Laurel in the parks and gardens of temperate Europe. Unfortunately these handsome plants are not hardy in the northern United States. In our southern gardens they are replaced by the so-called Mock Orange, the indigenous Prunus Caroliniana, a tree which sometimes grows to the height of thirty or forty feet, and produces lanceolate acute lustrous leaves, short erect racemes of white flowers with conspicuous orange-colored stamens, and oblong black fruit half an inch in length. This tree may be found in the immediate neighborhood of the coast, growing in deep, humid bottom-lands from the valley of the Cape Fear River in North Carolina, to that of the Guadaloupe River in Texas. In the south Atlantic and east Gulf states it is not particularly common, but it abounds in eastern Texas, where it grows to its largest size, and sometimes forms impenetrable thickets in the neighborhood of streams. The leaves and young branches of this tree, like those of many of the species of Laurocerasus, contain at the period of active vegetation considerable quantities of hydrocyanic acid, making them dangerous to animals browsing upon them. The partially withered foliage is particularly dangerous, and a city ordinance of Mobile prohibits people from throwing into the streets the clippings of hedges of the Mock Orange. This Cherry-tree appears to have been one of the first native plants used by the settlers on the southern coast to decorate their homes, and now there are few southern gardens that are not beautified by a hedge or by a group of Prunus Caroliniana.

In California, Laurocerasus is represented by Prunus ilicifolia, the Islay, or, as it is sometimes called, the Spanish Wild Cherry and the Mountain Evergreen Cherry. It is a small tree twenty or thirty feet high, with a short stout trunk sometimes two feet in diameter, although generally much smaller, covered with thick dark red-brown bark. The branches are stout and spreading, and form a handsome, rather compact head. More often the Islay is a shrub rather than a tree, and sometimes, when it grows on the dry gravelly slopes of the southern coast-ranges, its stunted stems only rise a few inches above the surface of the parched soil. The leaves are beautiful, large, dark green and very lustrous on the upper surface, and usually sharp-toothed like the leaves of the Holly—a peculiarity to which this tree owes its specific name. The flowers in slender racemes, sometimes three inches long, are conspicuous from the bright orange-brown color of the large cup-shaped calyx, the small petals being pure white. The Islay flowers profusely, and the contrast between the color of the flowers and that of the foliage is strikingly beautiful. The fruit, too, is ornamental; it is sub-globose, sometimes two-thirds of an inch in diameter, and dark red when first fully grown, becoming dark purple or nearly black at maturity.

The Islay is a native of the coast-region, from the shores of the Bay of San Francisco to Lower California, extending inland in southern California to the western foot-hills of the San Bernardino Mountains, and preferring the neighborhood of streams, where, in moist sandy soil, it attains its best dimensions. It grows, too, on Santa Cruz and Santa Rosa Islands, off the California coast, where a form peculiar for its usually entire leaves has recently been discovered.

It was David Douglas, the hardy and intrepid Scotch botanist, the discoverer of some of the noblest trees of western America, who found the Islay sixty-odd years ago growing in the neighborhood of Monterey, although it was not properly described until some years later. Long before the days of Douglas, however, the Catholic Fathers, who penetrated California from Mexico and were the first white men to obtain foothold in that region, appreciated the beauty of the Islay and planted it in their gardens. They were wise in their generation, for, with the exception, perhaps, of the Great Magnolia, the Tolon (Heteromeles arbutifolia), another California tree, the Umbellularia, the Madroña and some of the Rhododendrons, North America does not possess a more beautiful evergreen tree. But the successors of the Spanish missionaries are less appreciative of the value and beauty of the flora of the Pacific coast, and, neglecting the plants nature has prepared for them, hunt through the antipodes for material which as often disfigures as beautifies their homes.

The Islay is an easy plant to cultivate; it grows with such rapidity that we are told of seedlings in the nursery of the Leland Stanford, Jr., University only three years old eighteen feet in height with heads fifteen feet in diameter. No plant is better suited to form an impenetrable hedge or to decorate a garden, and when California has passed through the stage which every new country experiences in gardening, of believing that exotic plants are better than the native products of the soil, the Islay will become one of the best ornaments of California gardens. Unfortunately, it is not hardy in the eastern states or in northern and central Europe, although on the shores of the Mediterranean it is apparently as much at home as on those of the Bay of Monterey.

The illustration on page 475, representing a wild specimen, is made from a photograph which has been obligingly sent to us by Mr. E. L. Woods, of San Francisco.

The danger that the Central Park will be overcrowded with statues and other monuments increases from year to year; and, despite the fact that greater care is now taken than was taken even a few years ago to exclude those of an inartistic kind, public sentiment is still not sensitive enough on this point; and as long as public sentiment does not sustain them, the difficulties with which the Park Commissioners have to contend in deciding with regard to suggested monuments must be very great.

No statue ought to be admitted to a public park unless it satisfies the taste of competent judges, for poor works of this kind do injury alike to the memory of those whom they profess to honor, to the reputation of those who bestow them, to the best interests of the public, and to the beauty of the great pleasure-ground itself. Still more. The mere fact that a statue is intrinsically good does not always justify its admission to the Park; it must be not only good, but good as an ornament for a park. And, moreover, it must be appropriate to the special site selected for it; or, to turn this fact the other way, an appropriate site for it must be selected. There are certain situations in a park where no statue or monument would look well, and there are others where a work of one kind would look admirably well, while a work of another kind would injure the effect of its surroundings while not appearing to good advantage itself.

The more formally arranged portions of a park are, of course, those where works of sculpture or of architecture, or of the two combined, are most appropriately placed. We are glad, therefore, to learn that the Park Board, while recently accepting the suggestion of Mr. Calvert Vaux, their landscape-architect, that a proposed Thorwaldsen statue be placed near the park entrance at Sixth Avenue and Fifty-ninth Street, at the same time approved his general recommendation that the Fifty-ninth Street frontage of the Park be borne in mind as the station for monuments which may be offered in the future. Here, between the trees which border the sidewalk in a symmetrical line, such objects can certainly be placed to better advantage than in any of the naturally treated portions of the Park. And, if such a change is feasible, we should be glad to see carried out the further suggestion that some of the statues already standing in the Park be removed to the sidewalks around its borders.

As the Mall is a formally arranged feature of the Park, it likewise offers an excellent station for statues. If a fine row of monuments existed here, alternating with the regularly spaced trunks of the overshadowing Elms, and having their pedestals partially draped in close-growing vines, as is the custom with park monuments in Paris, the effect of this long perspective would be beautiful indeed. But, unfortunately, the few monuments which have already been placed here are poor ones; to increase their number without bettering the quality would be most unfortunate; and, therefore, these sites should be preserved with especial care by the Park Commissioners, and be jealously reserved until, from time to time, works of an exceptionally high degree of artistic merit and appropriateness may be offered to the city.

Overland in the Cayuga Country.—IV.

WITHIN two or three miles of Geneva begins the fruit region of western New York, which stretches away to Lake Ontario and Niagara Falls on the north-west, and to Chautauqua County on the south-west. All this country is not devoted to fruit-growing, but orcharding is its dominant industry, except in some extensive grain sections like the famous and superb Genesee valley. The fruit-interest is comparatively new here, although the Apple-orchards of western New York have been famous for many years. The oldest vineyards are twenty or thirty years old, but most of the Grape-interest is comparatively recent. All fruit-growing in this part of New York is flourishing, and is rapidly extending. This is especially true of grapes, plums, and, to a smaller extent, apricots. The small fruits are yearly gaining in importance, as is shown by the reports from the numerous canning factories and evaporating establishments. Besides this, the nursery-interest is the largest and most varied on the continent. All about Geneva and many other cities and villages of western New York are nursery blocks, ranging from a few square rods of Quinces or Plums or Berries in some village yard to a hundred acres cultivated by the nurseries. The little patches here and there afford a profitable use of bits of land, for the product, if carefully grown, is sure of sale to the nurseries. Much of this stock is grown upon contract for the nurserymen, who often furnish the buds, and sometimes the seed. Much of the nursery stock sold through Rochester firms is grown at Geneva. Many of the fruitmen are graduates from the nursery business, and their training has made them, as a class, the most acute fruit-growers whom I have ever known.

T. C. Maxwell & Bros. have several farms in fruit and nursery stock, and their places may be considered types of the extensive fruit-culture of this region. At this place they have 150 acres of fruit in bearing. We drove through a continuous orchard of Plums of eighty-five acres, every tree heavy with the promise of a bountiful crop. The orchard is scrupulously clean, for all the Geneva growers believe in clean and frequent culture. The tops are started four or five feet high. There are some two dozen varieties in these orchards, of which the most profitable are Reine Claude, Purple Egg, Fields (often called Early Bradshaw) and Bradshaw. Other prominent varieties are Purple Damson, Frogmore Damson, French Damson, Farley, King, Guii, Coe's Golden Drop, Copper, German Prune, Smith Prune or Diamond, Middleburgh, and Monarch, the last a very valuable, large, blue, late plum. Here are also eighteen acres of Quinces, of Orange and Rea, the former being the better. Upon another farm across the lake the Maxwells have a block of Quinces of thirty acres, and the orchard is famous among fruitmen. Here are ten acres of sour Cherries, English Morello and Montmorenci. The Montmorenci is a famous cherry in this region, coming in a little ahead of the Morello. This is the Montmorenci ordinaire; another variety, the Montmorenci Large-fruited, is an unreliable cropper, and is rarely grown in western New York. The remaining orchards contain Apples, largely Baldwins, and other common varieties.

All these orchards, of one hundred and fifty acres, are carefully sprayed for insects and fungi. A hand field force pump carried upon a tank in a wagon and Peerless nozzles are used exclusively. Plums are sprayed two or three times for the septoria or shot-hole fungus, which causes the premature falling of the foliage, but for curculio the sheets are still used. Plums are treated with the ammoniacal carbonate of copper. The knot is fought industriously. Twice during the summer every tree is carefully examined by two men, who walk upon either side of the row. This examination, together with the search which is made in winter, has thus far kept the knot in check; but all the growers in this region are apprehensive of this disease, and the new law for its extermination is being enforced with vigor. Cherries are also sprayed with the copper carbonate to combat the leaf-blight, a disease which causes the leaves to fall before the fruit matures. The best fruit-raisers recognize the fact that abundant and healthy foliage is essential to a good crop of fruit. Quinces and Apples are sprayed twice with Bordeaux mixture, about a week after the blossoms fall, and again two weeks later. This treatment is aimed at the leaf-blight on the Quince and the scab-fungus on the Apple. For both Quinces and Apples, Paris-green is mixed with the fungicide for the purpose of killing the Codlin-moth

larvæ. This is a fair sample of the attitude of our New York fruit-growers toward spraying. The practice has taken an assured place among the operations of the orchard, and I imagine that if either spraying or cultivation had to be given up for any year, most growers would discontinue the cultivation.

The Maxwells, in all their orchards, devote the land exclusively to the trees, and this is the common method; but an entirely different system may be seen upon the farms of S. D. Willard, whose methods, like the man himself, are unique. Mr. Willard has long been known as one of the most reliable and energetic of the New York nurserymen, but his legitimate fruit interests are very large and receive the greater part of his devotion. Although Mr. Willard's chief energy is devoted to Plums, concerning which he has the most exact knowledge, he grows every fruit which will succeed in New York. He is particularly fond of the English Gooseberries, Currants and Apricots. He derives intense pleasure from every tree and variety upon his plantations, but the ultimate test of every new thing is its commercial value, and I have never yet found an establishment which so happily combines the two sides of fruit-growing—the pleasure and the profit. The greatest energy is directed in securing new varieties, both domestic and foreign, and these are top-budded or top-grafted into old trees, being designated by numbered tags. Several valuable fruits have been brought to notice by Mr. Willard in this manner, prominent among which are some of the Japanese Plums, especially the Burbank, which have here been well tested for our northern country. Mr. Willard's method of fruit-growing is peculiar and may be described as a mixed intensive method. The leading fruit of the plantation is systematically planted, but the spaces between the trees are jammed full of the most puzzling assortment of fruits and other plants. His oldest fruit-plantation was originally an Apple-orchard. Between the Apples were set Plums, and as these and the smaller fruits become more profitable, with approaching maturity, the Apples are cut off. "Apples are too slow for me, and there is not enough in them," is Mr. Willard's characteristic remark. "They are p[illegible] for larger farms and cheaper lands, but I can make m[illegible] money from the more perishable fruits." So the skeleton of this unique fruit-plantation has been gradually transformed from Apples into Plums. Between the Plums in some places are Quinces and Berries, or perhaps Grapes, here and there; now a row or a few trees of Pears, mostly of the favorite Kieffer, a plantation of Blackberries with Strawberries between; a bit of English Gooseberries or Raspberries or Currants, or a few rows of nursery stock, very likely mound-layered Multiflora Roses or Magnolia Stock. Everything is crammed, jammed and tucked up, and everything is remarkably thrifty and productive. In fact, one is astonished to find such a system successful, and with most men it could not be so, but here it works to perfection. It is the only place in which I was ever really satisfied that such thick and mixed planting is successful. The secrets of success here are manure and cultivation. The land is naturally strong, and would generally be regarded as rich enough for fruit-growing, without fertilizing; but the soil turned up by the cultivator along the rows shows a liberal quantity of fine stable manure well mixed in. Pruning, spraying, bug-catching, and all the other requisites to the best orcharding, proceed upon well-considered plans. There are several of these places where Mr. Willard practices this intensive culture, or something like it, and everywhere one is struck with the enthusiasm and determination of the man. There are nurseries of large dimensions belonging to him and scattered over a wide territory. The feature of these nurseries which especially strikes the visitor, is the enormous quantity of Birches, for here, I suppose, the ornamental Birches are grown in greater quantity than at any other establishment in this country.

But a volume could easily be written upon the horticulture of Geneva. It is altogether a remarkable and productive country, and the soil and the inhabitants appear to be as fresh as they were in the days when the great wheat-fields covered these hills and plains. Here, too, is the State Experiment Station, with unrivaled facilities, in its own equipment and in the neighboring farms, for horticultural work. But we have already tarried long at Geneva, and we must turn homeward. We again round the foot of Seneca Lake, but instead of striking diagonally across the divide toward Cayuga, we skirt its shores upon the west for many miles. Here we miss the villages which we found in the outward journey, but, what is more to our liking, we are constantly coming upon orchards and vineyards and snug homes. Yet this western shore of Seneca is only partially developed horticulturally. It has great possibilities which are coming now to be appreciated. There are isolated plantations of great extent, the most notable of which is the great Smith farm near Ovid, overlooking the lake from a most commanding bluff. In some respects this is one of the most important orchard and vineyard establishments in the lake region, particularly for the great number of apricots which are growing in orchards like plums or peaches and which are found to be a successful fruit for market. This great plantation stands like an island in a desert of indifferent old-style farms, a perennial proof of the possibilities of the soil when tilled with diligence and fertilized with thought.

Soon we turn eastward over the hills. As we rise above the lake we pass away from the orchards and vineyards and find ourselves among broad fields of hay and grain. There is little corn, and the higher we go the less corn we see. Now Seneca Lake lies far below us like a broad blue ribbon, and the patchwork hills to the westward are tilted in haze against the sky. It is an inspiring panorama, and we stop our horse often that we may look back upon it. But the immediate prospect is no longer pleasing. We are reaching the tops of the hills and we are far from any village. The land looks cold and thin. It is no longer cultivated in warm, snug fields. It is nearly all in grass, and the land has long since lost its blood and body, as the plant-food it contained was taken up by the grass and sold away in the hay. The acres of daisies, the broken fences, the staring barn-yards, the half-finished or ruined farm-houses, all show that the farmer has been made to pay the penalty of his own ignorance and indifference. He is too far from town to attend the institutes and to receive the benefits of contact with his fellow-men, and somehow he has never noticed that the farms beyond him upon either slope, where grain and corn and grass have been rotated these many years, are much better and brighter than his. He is too high up to grow corn for market, but he can do something beside raise grass, or he can sell his grass as beef or mutton or butter and have the manure for his land. But he has sold the heart of his farm to the hay-dealer years ago, and he is an object of pity now. Cold and bare and cheerless he drags out the weary years upon these Cayuga hills.

Now we pitch to the eastward into warm, fertile valleys and by cosy homes, and under their inspiration we jog on happily to Ithaca and end a pleasant four days' ride.

Cornell University. *L. H. Bailey.*

Shongum.—II.

THE great thickness of the sandstone ledges of these mountains, and the natural cementing of the crevices in these reservoirs by disintegration, have preserved several small lakes amid the uplands in positions that add much to the beauty of the scenery and to the variety of the vegetation. Lake Minnewaska is nearly a triangle in shape, three-quarters of a mile long by a fifth of a mile wide, and forty feet deep in its deepest places, while the shores are everywhere bold and rocky. Its clear pure waters reflect the tint of rock and foliage, or, like a mirror, lie open to the sunshine and the sky. Along one side the walls of white stone are regular in their stratification and rise perpendicular to the height of ninety feet, with a buttress here and there supporting an overhanging slab, square cut, as if made with tools. All this is covered with leathery brown lichen, indicating great age, and testifying to the hardness of the material on which it grows. Huge heaps of rock along the margin of the lake, and running up into the few ravines that break the wall, give place for the growth of trees and shrubs. There are Pines ten inches in diameter and thirty feet high, with no apparent diet except sandstone and water; but the curious and far-reaching wisdom with which roots sometimes larger than the trunk of the tree are twisted among the stones and wedged into their crevices suggests the possession of some hidden knowledge of food by the Pinus resinosa. Under these, and among the débris they have made, the Kalmia and the pretty Mountain Holly (Nemopanthes fascicularis) luxuriate, clothing the feet of the giant cliff with a soft green mantle as they dip under the water.

Opposite the cliff the shore is more irregular in outline and slightly receding, so as to give place among its ledges for the most picturesque growth of trees, among which the Peperidge (Nyssa) is frequent, and already gay in its brilliant autumn colors. Along this edge of the lake, also, among more common Ferns, is the delicate Osmunda regalis. The eastern end of the lake is narrow, and here the walls break down to give an enchanting perspective, with the blue hills along the Hudson on the horizon. A similar break at one of the western corners gives a glimpse of the Catskills and the nearer mountains, which we watch with eagerness when the glory of the sunset makes a sublime picture of earth and sky.

Lake Mohonk lies to the north-east, seven miles away, and is smaller and more regular in outline. Lake Awasting, five miles to the south-west, holds about the same level with its fellows, of 1,650 feet above the tide, and is much larger and deeper. Its length is two miles, its greatest width half a mile, its greatest depth eighty feet, with the same bold, rocky shores and general formation of cliff and forest. But from this lake, and from an extensive marsh not far below its outlet, flows the large stream which, in its descent, makes the poetry of these woodland walks, and for many miles gives the voice of its music, in numberless cascades, or in its two roaring falls, to swell the grand diapason of the winds in the Pines that crown the cliffs above. The stream is a constant joy and excitement, and reconciles the dwellers here even to that horror of invalids and idle people, a rainy day.

After a rainy day I went to Awasting Fall, through a woodland path that descends sharply from Lake Minniwaska three-quarters of a mile to meet the stream. The growth just here is chiefly of Chestnut and Maple, both Red and Sugar Maple, mingled with Birch. There are no large trees, but the graceful creatures stand like young matrons with their children of different ages around them and their babies at their feet. The Sassafras is everywhere. I have great sympathy with this tree because of its love of variety. I am persuaded it would like to be a Dolly Varden, and flaunt in gay clothing, but, being devoid of all expression of such taste, it can only blush a dull red at the tips of the wet fingers it puts forth to greet us, and show a little dash of color in its petioles; and so it constantly employs itself in changing its form of garniture. No matter how small or how large it may be, did anybody ever see a branch of Sassafras where the leaves were all alike?

Interspersed among these were a few Chestnut Oaks, growing low and bushy, and higher than all rose the scattered Pine-trees. The path descending over ledges of white rock, where grow scant mosses and lichens, and along the edge of a cliff, which walls in the head of a deep valley, brought us to a point where the stream, already vexed to foam in its swift course, makes a leap of seventy-five feet to the pool below. On the further side the rocks rise to a perpendicular height of one hundred and fifty feet, and then recede, still rising, broken and covered with Pines, to a greater height. Beneath flows the stream, while on the nearer side the cliffs are curved around a deep basin that may once have been a lake. The débris of fallen rock and tree, rising gradually from the stream half-way up this cliff, makes a deep soil always moist and warm and sheltered. Here once grew great Hemlocks and Pines, but they became food for the mill below, and since then fires have often swept over these heights. Now as I stood beside the stream at this lower level I found a twilight made by tall Maples and Chestnuts, with a White Oak here and there, and abundance of Black Cherry, which might in time become valuable, and many Birches, among them Betula papyrifera, which I did not find on the hill above. There were thickets of Laurel now ripening its spiked berries, the Rhododendron was vigorous and tall in the black soil, and occasionally a Rhodora grew beside the path.

Reluctantly I turned from the beauty of the waterfall. When I had seen it before it was a filmy veil, falling over a projecting edge curved like a scimitar, and breaking into spray through which the morning sunshine wove prismatic colors, and a thousand broken rainbows danced over the worn gray rocks behind the waters. Now the air trembled with the roar of the mad stream, and the gorge near it was full of mist like rain, while the tormented pool dashed itself far over its usual bounds. Near it, against the cliff, huge rocks are piled, and these, green with thick mosses, nourish the Polypodium and other Ferns, while tall brakes grow between. Half-way down the cliff and wholly under its shelving edge, a Black Birch had rooted itself in the débris, and, growing luxuriantly, held in its upper branches a bird's nest, empty now and with the spray drifting over it. The ground was soft with mosses and covered with the Partridge-berry vine, the Swamp Blueberry and the Wintergreen.

In open places where the path touched the stream we saw it bathing the roots of Alder and Elder bushes, while Blackberry and Raspberry bushes caught us in passing, with an offering of fruit. In the clefts of the precipice opposite, small Pines and Hemlocks had taken root, and tiny Laurels, their leaves already ripe and red, and tufts of Columbine and Golden-rod; while the Hardhack, Spirea tomentosa, with its relative S. aruncus, grew plentifully by the margin, and nodded their white and crimson heads to each other across the amber flood speeding by with flecks of white foam.

Thus far for more than half a mile we followed our rapid guide, until the path merged into a wood road. Azalea viscosa bordered our way. All along, as we had looked up through the confused stems of the thickly growing trees, we had seen evidence of former greatness in prostrate massive trunks that now only serve as food for their successors. But beautiful in decay they were, covered with moss and Lycopodium, and the dwarf Club Mosses and wonderful Lichens, often in brilliant tints of orange and curious coraline forms of fungus, red, yellow and creamy white, as if they had mistaken the depth of this basin for the bottom of the sea.

And then our steps led to the country road, and crossing it we came in a few minutes to the "high Peterskill." This outlet of our stream is at a point where one wall of the mountain runs past the other, and the current makes a sharp turn, after taking its first leap into the gorge, over the foundations of that which had hitherto restrained its course; then, gathering itself, springs across the ledges two hundred and fifty feet down the ravine; and though beyond this point it is only a succession of cascades, after a rain it becomes a cataract, with no apparent division in the raging, plunging mass that flings its foam high in the air as it descends with a volume of sound multiplied by echoes from its rocky borders.

For these still rise high above it—on the west perhaps a thousand feet from the bottom of the ravine, which is only about seventy-five feet wide. But everywhere the graceful Birch and Poplar, the Chestnut and Oak, the Maple and Sassafras, and the Pepperidge crowd among the Pines that have wedged themselves in the crevices of the rock, and the Mountain Holly, with its brilliant berries, and the Dogwood, with crimsoning leaves, in its gray escarpment of rock and the music of its rejoicing waters, a thing of beauty worth going far to see.

The remains of a substantial mill, half-way down the gorge, and near the road, tell that this wild creature was once made the servant of man's need for lumber. A still greater wrong was done by robbing it of the historic Indian name, Aïoskawasting, and calling it the Peterskill. But under this latter cognomen it is known on the lower slopes of the mountain, where it pursues its course to the north-west until it joins the Roundout River.

When this region was covered with the heavy forest that sheltered the sources of springs now bare and dry, the stream had many affluents, and must have filled its whole channel, as the water-worn rocks everywhere testify. Even now, after long, heavy rains, or when snow melts in the spring, its volume is so much increased that bridges five feet above its usual level are carried away. Then the Awasting and the Peterskill falls are said to be magnificent and almost fearful in their might. After the lumbermen had sacrificed the primeval forest the land was left to recover itself, but the beneficent processes of nature have been constantly interrupted by fires that have raged everywhere, often burning deep into the soil and destroying all hope for the future. Now, except in deep basins such as I have described, the soil is poor and thin, and the green robe that covers it is more for beauty than for use. Yet even this the greed of man constantly imperils. The small farmers on the lower slopes, and the squatters hidden among the rocks, make a poor living by the harvest of Blueberries and other kindred fruit, and often have set fires to burn over large tracts because a growth of this kind follows. Those who would prevent this spoliation are obliged to use constant watchfulness, and all kinds of moral and material suasion, for the law gives them no adequate redress. The progress of civilization is shown in nothing more than in making man care for the welfare of all, above his individual good, and though the idea obtains slowly, there still are evidences that it is taking root in this neighborhood.

Minnewaska. *M. H. P.*

New or Little-known Plants.

Aster sericeus.

THIS handsome little species should be in every good garden of hardy plants. The stems, which are paniculately branched above, are only a foot or two high, and are well clothed with oblong leaves, which are silky white from the soft pubescence with which they are entirely clothed. The color of the leaves and of the bracts of the floral involucres serve as an excellent background for the ray-flowers, which are large and a deep violet color, and in late autumn make this plant exceptionally beautiful and interesting.

Aster sericeus is a native of dry uplands and prairies from Minnesota and Illinois to Tennessee and Texas. In cultivation it is perfectly hardy on the Atlantic seaboard, and quickly adapts itself to new conditions and surroundings. Our illustration below is from a drawing made by Mr. Faxon of a plant in Professor Sargent's garden in Brookline, Massachusetts.

Fig. 80.—Aster sericeus.—See page 472.

Foreign Correspondence.

The Chiswick Garden in England.

An interesting garden in England is the experimental ground of the Royal Horticultural Society at Chiswick, a suburb of London, and within easy reach of the great metropolis. It comprises about eleven acres and is devoted to testing the merits of fruits, vegetables and flowers sent for trial by the leading nurserymen of England, the Continent and America. Trials are conducted each year with the greatest possible care. At the proper season the committees visit the gardens and adjudicate upon the varieties. The potatoes, for example, are lifted in their presence, so that they can ascertain other points besides the appearance and table qualities. Before the Royal Horticultural Society expended such large sums in the acquirement of the gardens at South Kensington, laid out in costly style, but never profitable, the Chiswick Gardens were much larger, and in the preface to the fourth volume of the *Transactions of the Horticultural Society*, published April, 1822, we read that "a tract of land at Chiswick, which has been recently taken of his Grace the Duke of Devonshire, under a lease, renewable for ever, at the will of the Society, appears to afford in point of soil, situation and other conveniences, everything that could have been desired." The Chiswick fêtes held in the earlier days of the Society were more fashionable than even the fêtes of the Royal Botanic Society at Regent's Park at the present day. The grounds were the centre of attraction for the élite of London, and the fêtes were graced by the Royal presence. These palmy days are over, and a few years ago it seemed to be a matter for consideration whether the Chiswick Gardens should not be given up. A strong feeling for their retention prevailed, and Mr. A. F. Barron, the superintendent, is permitted to carry on the good work that he has accomplished over a long series of years.

It is a pleasure to record, after a recent visit to the gardens, that they are gay with flowers, and the plant-houses are in excellent condition. But they are only recovering from a period of depression, and in time, as the Society sees its way to extend more liberal help to the gardens, we shall find that the horticulturist will gain even more solid information than can be gleaned at the present day. It was at Chiswick that the great Apple Congress was held which did much to place the nomenclature of this fruit upon a proper footing, and the Pear Conference took place later, while during the past three or four years conferences on flowers, fruits, shrubs, and conifers in particular, have brought together horticulturists from many parts of England. These events have been duly recorded by Mr. Watson in his interesting letters, and, therefore, nothing further need be written concerning them.

A few of the most interesting features in the grounds at the present time may be noted. In the central walk, leading from the great vinery to the private gate of the superintendent, the most striking effect in color is gained. On one side a collection of Dahlias is now at the height of its beauty, and on a cool, moist, shady border, skirting by the side of a hedge of Box, the Tufted Pansy, as these hybrid

Violets are called in England, is thoroughly at home. The beds are filled with either one distinct variety or just enough to secure contrast in color. A collection of Tufted Pansies from such growers as Messrs. Dobbie & Co., of Rothsay, Scotland, entirely fills some of the beds. These plants are one sheet of color, varying from pure white to the profound purple of the great market kind, Archie Grant, one of the best self-colored varieties in cultivation. The flowers are of superb depth, bold, and borne with great freedom. This, with Bluebell, a variety of a paler, brighter shade, are the chief Tufted Pansies used in the border parks, where they form edgings or a groundwork to taller plants.

A fine effect is gained by a single bed of the variety Plenus maximus of Helianthus multiflorus. It is the finest of the late-blooming Sunflowers, the stems rising five or six feet in height, the leafage abundant, and the bold yellow flowers of great depth and substance. The best method of planting is to permit it to stand alone, with nothing for contrast, although, of course, careful use must be made of such bold, not to say garish, plants. We often crowd too much yellow into our gardens in the autumn.

At Chiswick, Messrs. Cannell & Sons, of Swanley, who grow the Tuberous Begonia largely for bedding, have several varieties for trial, and the flowers, especially of the crimson kinds, are intensely brilliant. Messrs. Vilmorin & Cie., Paris, and Messrs. Sutton & Sons, of Reading, are represented by varieties of Begonia semperflorens. They are delightful bedders, dwarf, compact and smothered with bloom. The best of these is Vernon's variety (rubrum), which appears to be the same as the Crimson Gem of Messrs. Sutton & Sons. The plant is about nine inches or a foot in height, the leaves deep green, in which there is a suspicion of chocolate, and the flowers are rich crimson, making a fine contrast. A bed of it would be very effective, and so would an edging of it if it bordered a mass of plants which properly harmonized or contrasted with the distinct quality of its foliage and flowers. Princess Beatrice is a little gem; the leaves are small, and the flowers pink and white, so profusely borne as to hide the foliage. We have few more useful edging-plants, and, like the ordinary tuberous types, it succeeds well even in unfavorable summers. Afterglow is a good kind with crimson flowers. A variety of B. erecta, from Vilmorin, named Nain Rouge Foin, is remarkable for its compactness and splendid crimson flowers that glow like fire. A very interesting group from the same Parisian firm comprises a number of double varieties with small flowers, the centre like a little rosette set in broad segments. Their freedom in flowering is extraordinary.

Early this year a note appeared about Fuchsia Dunrobin Bedder in Garden and Forest. Its behavior this year justifies all that was said in its praise. It is a charming dwarf hybrid, very free, and two beds of it here are not the least interesting of the various arrangements.

One of the principal flowers this year at Chiswick is the herbaceous Phlox, and collections have come from such well-known growers as Messrs. Paul & Son, of Cheshunt; Monsieur Lemoine, of France, and Mr. Forbes, of Hawick. It is worth while to name a few of the best, these having an excellent habit, dwarf, compact and bushy, and bold spikes of finely formed flowers of decided colors. A small revolution is taking place in regard to the perennial Phlox. Little is now seen of the tall, ungainly, scraggy types once so common, and, although there is no merit in mere dwarfness, the flower does not suffer from being shorn of much of its height. The case is different with the Antirrhinum, and the present practice of dwarfing it deprives the plant of its natural gracefulness and charm. I will give the names of a few of the best varieties that now provide the gayest masses of color: Iris, mauve-purple, dwarf; Henri Murger, a bold large flower, white with crimson eye; Eugene Schott, pink, white centre, the plant but a few inches high; Monsieur Henri Jacotot, white, crimson centre; Faure, very dwarf and compact, the leaves of a deep green color, and the flower large, white, with pink eye; Le Naine Blanche, white, yellow eye; Eugene Daugan-villiers, pinkish; Boule de Feu, brilliant crimson, remarkably effective; Jeanne d'Arc, a very beautiful white variety, not growing more than about two and a half feet in height; La Ville de l'Air, white, crimson eye; Bayard, purple; Pluton, crimson; Croix de Sud, white, with purplish rose centre; Jenny Greive, splendid truss, the flowers white, with a purple-rose centre; Delicata, white, rose-purple eye; Eclaireur, white, with centre of similar shade; William Robinson, salmon-rose; Hain Bébé, purple-rose, very dwarf; Neptune, almost white, the leaves very dark green; Massenet, fine truss, rose, the centre deep crimson; Longchamps, white, purple-lilac centre; Paul Bert, lilac-purple, shaded with white; Pluto, crimson-purple, fine truss, the leafage very dark green; Avalanche, white and flambeau scarlet. Many of these have been given awards by the Royal Horticultural Society, and, as will be seen by the names, are mostly of French origin.

Beds of Tea Roses, the glorious Japanese Anemone in variety, very charming the white against the rose, and African Marigolds will interest the visitor. The French and African Marigolds are placed in a narrow border, skirting the fine old wall that divides the splendidly kept lawn facing the old council room from the plant-house. And when one sees this type of Marigold, after being allowed to develop its beautiful leafage and fine bold flowers, one is compelled to contrast its appearance here with its appearance on exhibition boards. Like the Aster, the Hollyhock and other things one could name, the blooms are often cut with a short stem and are stuck on the boards without a single leaf. Fortunately this barbarous practice is passing away. One of the most pleasing beds we have seen this season was composed of the variety Lemon Queen, the flowers of a soft shade of yellow and large, in the centre, with an outer ring of a deep orange color.

Zinnias give their share of color, and the yellow flowers of a bed of Cassia corymbosa show well against the abundant green leafage. The Bouvardias Humboldti and Alfred Neuner, planted out when all fear of frost is over, bloom profusely throughout the summer. The flowers of Humboldti are white, sweetly scented, and those of the other kind white and perfectly double, like a little rosette. Hedychium Gardnerianum, with its spikes of bright yellow and fragrant flowers and rich musa-like leaves, is an excellent summer plant and gives an attractive variety. The use of such garden-plants as we have mentioned is a grateful relief from the round of Pelargoniums and carpet-plants year after year, and furnish pleasant pictures from the time the spring bulbs are over until the Michaelmas Daisies have faded. The collection of Sunflowers, which is large and comprises the best kinds, ought not to be passed without notice.

The rockery is not one of the least important of the many fine rock-gardens that abound in England, and its interest will be increased by the handsome gift from the Royal Gardens, Kew, of two hundred plants of the rarer kinds. But it cannot, of course, compare with such picturesque rockeries as that of Kew, a veritable treasure-house of rare things, splendidly grown, or of the famous rock-garden of the Messrs. Backhouse at York. Space fails to make mention of the collection of Figs grown in the house once given up to Palms and foliage plants, and of the vinery, one of the most extensive in England. In spring Chiswick is a garden of blossoms from the numerous Apple and Pear trees, of which there is an extensive collection. Altogether, Chiswick, though small, surrounded by residences and shorn of much of its former glory, is a charming spot, beautiful for its flowers and of the greatest interest to the practical horticulturist from its careful trials of fruits and vegetables and garden-plants, the most common kinds of which are not neglected.

London. *V. C.*

Cultural Department.

The Cultivation of Tuberous Begonias.

At the Begonia Conference held at Chiswick on the 23d of August last the senior partner of the firm of John Laing & Sons read a paper, of which we have before spoken. The very interesting history of Tuberous Begonias from the time of the introduction of Begonia Boliviensis, the list of the various species whose blood in turn has been added to the mingled strains to produce the present remarkable race; the care which has been exercised to improve the size, shape, texture and color of the flower and habit of the plant, have all been spoken of before. Our readers will be glad to hear some of Mr. Laing's notes on the more practical points of propagating and cultivating these plants, and we therefore give in a condensed form the last portion of his admirable paper, a copy of which has been kindly furnished us.

There are at least four ways of propagating Tuberous Begonias—by seeds, cuttings, leaf-cuttings and division of the tuber. The first two are the most practicable and profitable. Increase by cuttings is essential only in the case of choice standard kinds which are to be kept true to name. These are used chiefly for pot-culture, and as the most improved or advanced types of the race from which the finest strain of seeds is derived. Young shoots from near the base of the plants make the best cuttings, and they may be inserted any time during the growing season, but the earlier the better they will root and the better tubers they will form. A few of the young

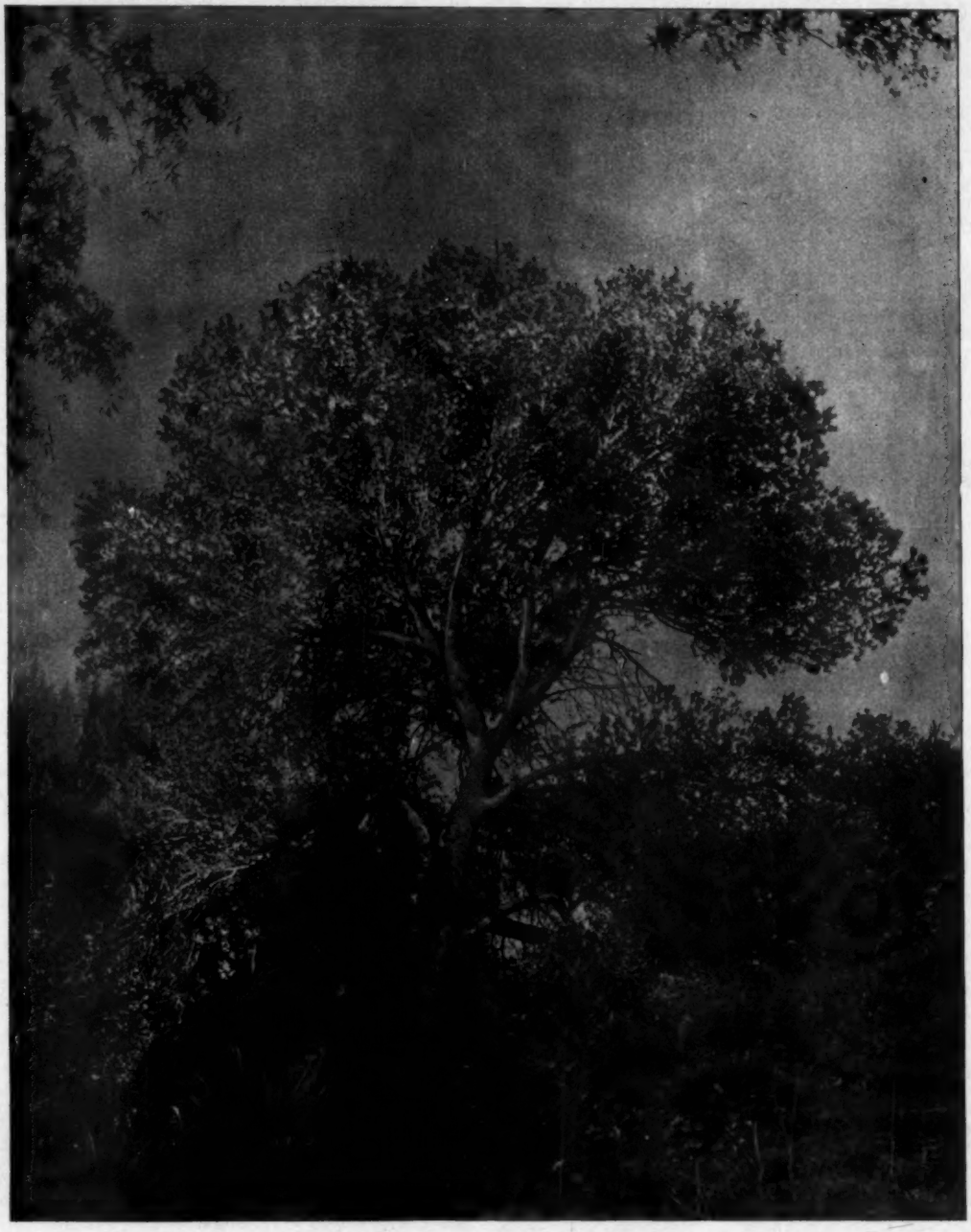

Fig. 81.—The Islay, Prunus ilicifolia—See page 469.

growths that arise from the tubers in spring may be taken; but the fact must not be overlooked that to take the same liberties with them as with Dahlias would be ruinous to a good display of bloom on the old plants for a season. The cuttings should be inserted singly against the side of thumb-pots in a compost consisting of loam, leaf-soil and sand, in about equal proportions, and plunged in cocoanut-fibre in the bed of a propagating pit or frame, and shaded till they have emitted roots, and may be grown on if required for late blooming. The young plants should be kept in the cutting-pots till the following spring, and this is the more essential in the case of late-struck cuttings, but, where practicable, the latter should be potted and kept growing.

Propagation by seeds is at once the most legitimate, speedy, profitable and certain mode of increasing this class of Begonias, either for pot-culture or summer bedding. There will always be a certain amount of speculation with regard to the color, habit and character of the seedlings the first year, but, if derived from a good strain, they seldom fail to give satisfaction, and may be assorted for future work as they come into bloom. They may be sown at almost any time of the year, according to the convenience and requirements of an establishment. For my purpose I find the third or fourth week in January is the most suitable. Those who have a sufficient command of fire heat will find it advantageous to sow early in the year, as the seedlings are less liable to damp off than when they are germinated in May, June or July.

The seeds are sown in square, round or oblong pans or shallow wooden boxes, in a compost of light porous material, consisting of flaky leaf-soil, a little loam and plenty of sharp sand. This is mixed, and used in a rough state, with some finely sifted material on the top to form a smooth and level seed-bed, which is pressed firm, watered, or more suitably dipped, and then the diminutive seeds carefully sown. The pans or boxes are placed in a temperature of sixty-five to seventy degrees, with more bottom-heat. The seedlings are pricked out into other boxes from time to time, as soon as they can be handled, with a finely pointed piece of wood divided at the point to lift the seedlings. As they germinate very unequally, and in succession, the work of pricking them off employs some men and boys for weeks together. When the seedlings begin to get crowded they are transplanted into other boxes at a greater distance apart. By the middle of May they are ready for hardening off. During the first three weeks of June a staff of men and boys were constantly employed in planting those now in the open ground. By this time a large proportion of them have commenced to bloom, and several thousand of the most promising doubles, some of them gems, are transferred to 48-size pots and placed in new houses specially built for their reception.

The ground in which the seedlings are planted out is heavily manured and roughly dug up to the action of frost in autumn. Old tubers intended for bedding out should be started about the last week in March or the beginning of April; small-sized pots will be quite sufficient for them. A warm and showery month of June, and rather drier weather in July and August, are most favorable to Begonias in the open ground.

For pot plants one-year-old tubers are the most generally useful; but those of two or three years' growth make the finest specimen plants. When four years old they degenerate, some sooner, some later; hence the necessity of raising young plants to keep up the standard of perfection. The first batch of plants may be started about the end of January or the beginning of February, and they will flower in April or May, according to the amount of sunshine they enjoy or the artificial heat used. Successional batches of tubers may be put into heat during March or April to flower in June or July, and be it observed, that the more slowly they are brought forward, the more sturdy and durable will they be. Put them singly in small pots proportionately to the size of the tubers, in a compost consisting of equal parts of fibrous loam, leaf-soil, and sand in a rough or lumpy condition. Press the soil rather firmly, if short growth and a long season are desired, merely covering the top of the tuber. Stand the pots on a bed of cocoanut-fibre or plunge them into it, and keep the temperature of the house at sixty-five to seventy degrees. Should the soil be dry at potting time, give a watering; but after that it should be applied with discretion till the plants begin to grow freely. Tubers that have been wintered in pots may be put into heat, watered a little, and afterward damped down with the syringe till they start into growth, and then repotted into suitably smaller sizes. Light is of great importance in the early months of the year, and it is all-important that the plants should be kept as near the glass as possible, after they have started into growth, to encourage a short-jointed and sturdy growth.

Repot the plants before they become root-bound, and as the season advances, and the temperature outside becomes milder, gradually give more and more ventilation, for upon a cool and airy atmosphere a great deal of success in Begonia-culture depends. Low span-roofed houses give most satisfaction. The soft and watery tissue of Begonias soon responds to favorable or unfavorable conditions; therefore let them have a house to themselves where possible, and no make-shift permitted. The smaller plants may be grown on the side shelves on ashes or cocoanut-fibre, while the larger and taller specimens may be elevated on shelving, staging tier above tier in the centre of the house and near the glass. A free play of air among the foliage keeps it fresh and healthy, and a dry atmosphere prevents the spotting of either flowers or foliage, as the weather gets warm about April and onwards. More or less shading during the heat of the day will be required after that month. When the plants have finished flowering or become useless for decorative purposes, stand them out-of-doors, in a sunny position, but sheltered from wind, and keep them watered till the leaves show signs of decay, after which water may gradually be withheld till the tubers ripen and the stems drop away. Remove them indoors on the approach of frosty nights.

Tuberous Begonias as Bedding-plants.

THESE new-comers, which have so greatly pleased us the past three years, have been disappointing this season, though not from any fault of their own, or not from any cause that will impair their usefulness in the future. The trouble is that their true character has not been recognized. The enthusiastic grower has claimed too much for them when he asserts that they can be grown in the same manner as the Gladiolus, and that the tubers can be kept dry and planted out when and where wanted just as the Gladiolus can. This mistake has cost many amateurs a good many plants, and has made them cautious about buying, and in some cases has quite discouraged them. This should not be, as the plant is all that has been claimed for it, and more.

The past year, it is true, has been a hard one for the Tuberous Begonia, as it has been for almost every other plant. Heat and moisture have not been proportionate. But the present season has only proved to us that this plant is not injured by hot weather, as is shown by the display made when it is grown on a large scale. Although the losses in the nursery have been considerable, they have been of great value in the line of practical knowledge. The lesson learned is, that it must be treated as a bedding-plant, and as such must have a good start in the greenhouse, and not transferred to the border until in a thrifty, growing state. The plants should be from four to six inches high, and proportionately strong when set out; then, even in a season like the present, they have no rivals. Those put out in Mr. Griffin's nursery this season, when well started, are marvels of beauty and healthfulness; they do not show in the least the effects of a drought or of heat. Those that were too young, and but little started, have suffered badly. The same is shown plainly in many other places, proving most conclusively that this plant has come to stay, and that it far surpasses anything we have in the way of low-growing bedding-plants, and, further, that to grow it successfully, plants, strong and well grown, must be put out, rather than dry tubers.

Floral Park, N. Y. *C. L. Allen.*

Planting Perennials.

MANY persons are now inquiring as to the best time to plant hardy herbaceous plants, and as the season is here when the operation may safely be carried out a few notes on the general subject will be timely. It has been stated that all hardy plants may be planted in spring, and the inference is that that is the best season to transplant. This is true with regard to shallow-rooting plants or those which are of small size when fully developed, but the trouble is, that in all gardens, large or small, the arrival of spring inevitably brings with it a rush of work peculiar to the season, and when this is completed many of the earliest border-plants are already well advanced, perhaps more so elsewhere than in our own gardens, and this adds to the risk of procuring them in spring. Last fall we found that Elm-roots had complete possession of a large border here, and at this season the whole of the plants were lifted, the border dug two feet deep and enriched, and the plants moved over as the work proceeded, and not a plant was lost. The season was a favorable one; the roots took hold at once, and when frost came the plants were well established. This spring we had six weeks of dry weather without a shower

after snow left, and had the work been done then many losses and a poor display would have been the result. It is a safe rule, therefore, not to put off until spring what may be done in fall.

Where alterations are contemplated in existing arrangements this is the best time to make a survey while the plants are in character. Strong-growing plants will be aggressive and exclude weaker ones, and attention to such matters should be given every year. Some plants, too, will die out from various causes. Seasons differ. A wet year suits some plants to the injury of others, and vice versa, and if this should chance to be an unfavorable time to make changes and supply losses, take notes of the situation so that the necessary changes can be made before growth commences next year. Up to this time we have had no frost, but as soon as the garden has been seared by it the plants that are herbaceous will be cut down, divided if necessary and replanted and the whole borders treated to a liberal top-dressing of well-decayed compost, which will remain on in spring and not be dug in. The annual digging and cleaning of hardy flower-beds requires skilled labor of the best kind to avoid injury to the dormant plants. Therefore the borders are left alone after the top-dressing in fall, and they look, to the well-informed, snug and comfortable.

The operation of planting means more than making a hole in the ground and thrusting the roots into it. Plants hold out in dry weather by means of their deep roots, and the proper way to plant is to take a spade and loosen the soil thoroughly over as large a space as the foliage should cover when fully developed. We should remember that the parts of a plant above and below the soil are beautifully balanced by nature, and if the one cannot develop the other will not.

There are always in the border plants that are more or less tender and which require lifting to protect them in winter. These should now be taken up and the roots placed in soil in a cool cellar. Plants keep better in such a place than in a frame outdoors. Tritonias (Kniphofias), Montbretias, Arundo donax, Pampas Grass, Eulalias, Helianthus multiflorus, Melianthus major, Conoclinium cœlestinum, Hibiscus coccineus, and possibly the Japan Anemones, which are sometimes winter-killed with us, are better for this treatment. This lifting of plants is not altogether an unmixed evil, for it gives an opportunity to have fresh combinations each season, and in this way monotony is avoided. Pennisetum longistylum, a most elegant Grass, is now at its best. A recent writer in Garden and Forest spoke of it as an annual; it is as much a perennial as the Eulalias or Arundo, but requires lifting in fall. Our clumps were stored in the cellar last winter and are much larger than seedlings would be.

It remains now to note what not to plant at this season. For the most part all prostrate plants should be set out in spring, such as Gypsophila repens, Veronica repens, Arenarias, Arabis, Sedums, varieties of Phlox subulata, Myosotis, dwarf Silenes, Lychnis and Campanulas, all ornamental grasses, Hollyhocks, Anemone Japonica and Hellebores of all kinds. Prostrate plants do not take hold so readily in fall as deeper-rooting kinds, and they cannot be mulched so safely to prevent heaving by frost when they are planted late and not protected. All plants of doubtful hardiness should be set out in spring; all of the above-named list belong to one of these sections. By fall planting I do not mean November planting, but planting as early as possible now, before the natural warmth of the soil is exhausted. It takes some weeks to cool the soil, and plants take hold at this season and start away next year as though there had been no check. Hardy Lilies should in all cases be planted in fall, but the new bulbs from Japan do not arrive until the ground is frozen up, and they have to be kept over till spring in a cool place, but where transplanting has to be done in one's own garden, the time to do it is as soon as the stalks turn yellow, as root-growth at the base of the bulbs commences with the end of the flowering season, to fortify the bulb as it were in its effort to produce a flower-shoot. This flower-stalk, when once started, is self-supporting by means of the stem-roots.

South Lancaster, Mass. *E. O. Orpet.*

Water-lilies.

SOME specimens of Nymphæas sent by Mr. J. Brydon from the gardens of Miss Simpkins, of Yarmouthport, Massachusetts, are marvelous examples of the best cultivation, and most vigorous growth. A flower of N. Zanzibarensis fully a foot across, highly colored, and on a stem about an inch in diameter, probably represents this variety in its very best form. There was also a fine specimen of the very dark purple variety, which is somewhat rare, as it seldom reproduces this rich coloring from seeds. The odor of N. Zanzibarensis is one of its special charms, being very distinct, delicate and pleasing. Only second in size to the N. Zanzibarensis was a flower of the N. gigantea, the rare Australian species, with which few cultivators have succeeded in the open. This is a Nymphæa with petals less blunt than those of the Stellata type, and of less firm texture. The flowers are blue, shading to white toward the centre, which is crowded with a mass of thread-like golden stamens. This species is very distinct from the other tender Water-lilies, not only in its coloring and stamens, but also in its less formal character. When well established it is one of the most prolific of bloomers. The stems of these Nymphæas were about one foot and a half to two feet long, and as straight as canes. In a note with the flowers, Mr. Brydon says: "I claim that the finest Lilies are those grown in deep water; by deep water meaning two feet or two feet and three inches. Perhaps where it is not possible to artificially heat the pond, shallow water would be preferable, but it will be at the expense of the flowers every time. I contend that the buds of the tropicals should not show above the water more than two or three days before they open. In shallow water they are above water long before they are half-developed. I like to see them come straight up from the bottom and flower shortly after they appear above the surface. The finest flowers of N. odorata I ever saw were grown in four feet of water, and it seems that if this variety will do so well under such a depth of water the tropical kinds should stand much more than is commonly given them, as they are mostly strong-growing."

I have been a consistent advocate of shallow planting, but it gives me pleasure to call attention to the apparently contradictory views of so able a cultivator as Mr. Brydon, who is, no doubt, correct under the conditions given. One can scarcely cultivate plants very long before making the discovery that when growing in the open, exposed to all the contingencies of such exposure, success is at the best rather uncertain. Hence it is customary, when crops are important or especially well-grown flowers are desired, to resort to shelters or aids of some kinds. In this view, no doubt, heated tanks are very serviceable and important aids to the cultivation of Nymphæas. And in them, with the temperature of the water, which is such a vital matter, under control, no doubt, in an average season, the best results can be secured, and deep plantings can be made as seems necessary for the best results. But heated tanks are not always available, and my notes of my practice of shallow planting have been made in the hope of interesting the owners of small gardens in aquatics. Some of us are quite satisfied with modest results, being debarred often by expense, and sometimes by other considerations, from securing the very best results attainable. In such cases, in this latitude, with its changeable weather, not always with reliable warmth, shallow planting of Nymphæas is safe and satisfactory practice, as the plants are in a position to respond promptly to the quickening power of the sun.

Elizabeth, N. J. *J. N. Gerard.*

Decay of Quince Fruit.

THERE is a destructive form of Quince decay about which the growers of Quinces are much exercised. The fruit is the object of attack, and in nearly all cases the rot begins at the blossom end. It is a dry decay and the affected portion turns a light brown, followed soon by multitudes of small pimples slightly darker than the surrounding brown. The decay penetrates to the core and ultimately involves the whole fruit.

In one orchard of a hundred trees recently visited, nearly half of the fruit, otherwise large and fine, was found with a rot-spot ranging from a mere speck at the blossom end to entire decay. It may be that some substance applied to the blossom end will assist in preserving the fruit from attack. It is possible that the tender parts of the flower may be the ones most susceptible, and by removing these when the quince is small, the enemy may be successfully resisted. Thus the calyx lobes might be removed, as they generally become brown and, lying upon the surface of the fruit, probably assist in giving the rot-fungus a foothold. It would be practicable to remove the useless parts of the blossom end of the fruit, as quinces are within easy reach of the ground, and usually only a few trees are grown. This treatment would be in addition to the spraying of Quince-trees to ward off common leaf-blight, an entirely different fungus. The enemy of the fruit is Sphæropsis Cydoniæ. It also preys upon the foliage and was, in fact, described from specimens from leaves. It has not, this season, been found upon the foliage of the trees.

The decaying fruit is worthless and should be picked off and burned. If left upon the trees or ground, the fungus will mature a vast number of its oval brown spores and menace the quince crop next year.

Rutgers College. *Byron D. Halsted.*

Correspondence.

Frozen Chrysanthemums at the Royal Aquarium.

To the Editor of Garden and Forest:

Sir,—On the first page of this morning's *Standard*, sandwiched between an announcement of fireworks at the Crystal Palace and another of Buffalo Bill's Wild West, the following paragraph caught my eye:

"Royal Aquarium: The National Chrysanthemum Society's Grand Show of early Chrysanthemums, Dahlias and Gladioli will be unusually interesting, showing new varieties brought from the antipodes to this country in frozen blocks of ice."

A few hours later I was paying my shilling at the entrance turnstile. The Royal Aquarium is a long brick building with a glass roof, reminding one in its architecture of a good many railway-stations. It stands in a back street, within a stone's-throw of Westminster Abbey, fortunately where it cannot mar that stateliest of London's groups of towers, which the Houses of Parliament and St. Margaret's join with the Abbey to compose. The last time I remember passing it, the building was liberally bespotted with huge posters announcing the presence within of Niagara with real water, and an English lady had told me that she thought it "very kind of the Americans to send the falls over." But now the vast inner hall was filled with a bewildering choice of attractions. Just within the door was a shooting-gallery; beyond, a loud-voiced phrenologist was assuring his audience that the "subject" under consideration "'ad such a 'ead that 'e'd make a capital heditor." Further still, there was a small stage, its lowered curtain covered with what was perhaps an attempt to picture the mythical Snake-plant of Central America.

Rounding the empty dress-circle of this expectant theatre the flower-exhibit appeared, admirably arranged on parallel tables, set well apart, and culminating at the further end with huge pyramids of Chrysanthemum-plants and the frozen blossoms from New Zealand. Passing up to these, the chief attraction, one was detained by the superb specimens of the Madame Desgranges Chrysanthemum. The perfection of these great, soft, snowy heads is indescribable, and there was a sport of this variety, to which a medal had been awarded, where a delicate pink tip appeared on the three outer rows of petals. It rivaled the original in beauty, but no name has yet been given it. The professional decorator may be earnestly recommended to place side by side, exactly as they were to be found here, Mrs. Burrell and the Incognita, for theirs are the peculiar shades of yellow and pink which make a charming combination. There were, upon the whole, few startling novelties to note; the efforts which the gardeners have been making in the line of mauve and purple tints have not as yet been really successful. The Louis Boehmer, whose hairy pink florets were first seen in America, has sprung into favor here, and there were some splendid specimens on view, maintaining the reputation of the variety for hardy growth and free bloom. The color, too, is superb, a rich, deep, almost oriental, pink. One gardener at my elbow declared that it had darkened since its arrival in England.—[This "rich, deep color" is not the strong point of this variety, as it has been seen in America.—Ed.]

All this, however, is in passing to the great attraction, which proved curious enough. The blooming-time of Chrysanthemums in New Zealand is in our spring, and last April eight flawless blooms of six distinct varieties had been cut, plunged each in a zinc cylinder filled with water and frozen solid. These cylinders were in turn packed and frozen in a zinc tank and thus shipped to London, where they had been waiting a month for this exhibition. When the various receptacles were opened and sufficiently thawed to make it possible to discern the blossoms lying imbedded in their cakes of ice they were found to be wonderfully well preserved. Save for a little discoloration at the edges, as from the nip of sudden frost, their tints were as fresh as any there—the livid pink of the Zealandi, the lemon-yellow Tarawera and the white, hairy Rimutaka. Mr. John Easland, of Wellington, New Zealand, who conceived this application of the freezing process, received from the committee a medal and certificates galore, but probably the furnishing of Covent Garden Flower Market will not become a large branch of New Zealand trade. It is the botanical lecturer or other specialist who is likely to seize on the idea and make infinite use of it. The great advantage of being able to preserve a given specimen indefinitely and produce it at an hour's notice must have occurred to every one who saw how successful was the experiment tested yesterday at the Royal Aquarium.—[Flowers in blocks of ice were seen at a New York exhibition some years ago, but they made no sensation.—Ed.]

I longed to show the English florists, by the same means, what our roadside Asters were like at their best. Golden-rods they have learned to grow fairly well here, though not as perfectly as in Belgium, and one sees more of them every year, while their Firefly Lobelia (L. flagrans) seems at first glance the very Cardinal Flower of our brooksides, only a little enlarged and improved; but the white and mauve Asters, which they have transplanted from our New England lanes and display among their hardy flowers, make but a pitiful show.

The Dahlias exhibited were almost better than the Chrysanthemums—especially the loose, open Cactus Dahlias, which were shown in tints of astonishing depth and splendor. It seems a pity that prizes should still be offered for the huge double Dahlias and that florists should go on wasting their time in developing them, for the more they are developed the stiffer and more hideous they become.

The single Dahlia, on the other hand, is one of the most beautiful of flowers, as well as one of the most effective for decoration, especially adapted, as the German gardeners have discovered, to parks and lawns, while a bed of them at the garden's end will give light and color till the nipping frost. And for this purpose the old varieties, with their smooth tints, are better than the modern bicolored flowers, beautiful as many of these are in themselves.

London. *Louise Dodge.*

[Double Dahlias and Camellias are stiff and formal, but with their rich colors and exquisite texture they still find admirers. Even among those who prefer single flowers, there are few who find them hideous.—Ed.]

Cannas at Bay Ridge, New York.

To the Editor of Garden and Forest:

Sir,—For the study of plants in all their phases it is often instructive, and usually interesting, to seek them where growing in broad masses or in large quantities. As seen in this way one gains a more correct idea, in some respects, of their peculiarities, which are accented on a large scale. In this way the true nature of a variety can be more readily determined than by the observation of one or a score of plants. Curiosity as to the popular Crozy's Cannas led me a few days ago to the celebrated nursery of Mr. James Dean at Bay Ridge, Long Island. Mr. Dean early appreciated the value of these plants, and is growing them very largely. He has a full selection of varieties, but Madame Crozy and Star of '91 are grown in a very large way. Two plots of these, each containing several thousand plants, were a brilliant sight on a bright September afternoon, and their distinctive qualities were well emphasized. Madame Crozy as grown here averaged about five feet high, while in the adjoining plat of Star of '91 the plants were flowering uniformly at about three feet high. The foliage of the former was decidedly the most satisfactory, and so are the flowers, which are broader in petal, more compact and of a clearer, pleasanter tone of red, to which the tint of rich yellow on the margin contributed an added charm. The difference in coloring was very much more marked in some specimens which had been grown under glass. Here they both show a purity of color and a massiveness of petal far superior to those in the plantation. There was also in the same house a selection of yellow-flowering seedling plants of Mr. Dean's growing which show a surprising advance over any previous introductions of this color.

My main errand to Bay Ridge, however, was to inspect a large bed of seedlings from Madame Crozy, which are especially interesting just now. Mr. C. L. Allen, in the *American Agriculturist* for September, argues that Madame Crozy is a true species, introduced about 1820 as Canna aurea vittata, and later known as C. limbata. This claim seems to be founded on a colored plate in Loddiges' Botanical Cabinet, London, 1820, and an observation that "a large number of seedlings from Madame Crozy had last winter come absolutely true to the type, both as regards habit of growth of the plant and to the color and markings of the flowers."

Mr. Dean's results with seedlings from Madame Crozy do not confirm this species theory, as only a small proportion, perhaps five in a hundred, could be classed as true Madame Crozy; a smaller percentage were yellow, some almost pure-colored, others with different red markings, while the large proportion were of various shades of red, with narrower petals than the type, and of generally less value, although the broad margin of yellow on certain individuals produced a striking effect.

Mr. Dean is a leading trade-grower of Azaleas, Cytisuses, Lilies, Palms, etc., and has been especially noted for his suc-

cess in providing Easter flowers and plants of the highest class. One lot of 20,000 potted Bermuda Lilies was an indication of the quantity in which plants are grown here.

Elizabeth, N. J. *J. N. Gerard.*

Recent Publications.

Something more than a year ago we published a condensed account of some experiments which Professor Bailey had made, to ascertain the effect of electric light upon plants grown in glass houses. Lettuce appeared to be greatly assisted by the light, and some ornamental plants produced earlier and brighter flowers under its influence, while some plants were affected injuriously. In these first experiments, the arc lamp hung inside of the house, and it was found that when the arc was screened by an opal globe or a pane of window glass, better results were obtained. This suggested the inquiries, (1) whether the glass roof itself would not furnish an appropriate screen, so that the light could be hung above it, and (2) if this were true, how much glass could one light profitably cover?

Without explaining the methods of screening the check plants, it is enough to say that an electric street-lamp was suspended over a greenhouse, and Bulletin 42 of the Cornell University Experiment Station contains a record of its effects upon a few common plants.

The benefit to Lettuce was quite as apparent this year as it was last, so that there can be no doubt as to the advantage of the electric light, in forcing it. Indeed, Mr. W. W. Rawson, of Arlington, near Boston, uses electric lights, which are run all night for the commercial forcing of Lettuce. Mr. Rawson estimates that he secures a gain of five days in a crop of Lettuce, by using this light, and as he grows three crops during the winter the total gain is two weeks of time. The gain from one crop is estimated as sufficient to pay the cost of running the lights all winter, and the effect of a 2,000-candle power lamp is marked at a distance of one hundred feet.

At the Cornell Station light was started on the 19th of October above some Boston Market Lettuce, four weeks old, and some seedling plants of Landreth's Forcing Lettuce, which were just beginning to show above the soil. The lamp seldom burned after eleven o'clock and often ran but an hour or two, and on moonlight nights it was not used at all. The house was exposed to sunlight during the day, in addition to this small and varying supply of electric light. A house which was lighted by the sun, but received no light at night, was used as a check. A clear glass globe surrounded the lamp, so that the light passed through two panes of glass, that is, the globe and the roof, before it reached the plants. In a single week after the light was started, the plants of Boston Market Lettuce began to excel those in the unlighted house, and when forty hours of electric light had been expended on them they were perceptibly ahead of the others. The plants directly under the light and from seven to ten feet from the arc were the earliest to show their superiority. On the first of November the lighted plants were one-fourth larger than the other, and showed a marked tendency to turn toward the light. The plants even in the farther extremity of the lighted compartment gained steadily throughout the experiment and were ready for market a week or ten days before those in the unlighted house, while in quality the Lettuce was indistinguishable from that grown under ordinary conditions.

Small plants of Landreth's Forcing Lettuce, which stood where they had been sown, behaved differently from the transplanted Lettuce. For the first week they were stunted, notwithstanding the fact that they were farther from the lamp than the Boston Market Lettuce plants which did so well from the outset. After some days of lingering, when the plants began to acquire three or four leaves, they rapidly recuperated and finally overtook their companions in the unlighted house, but they never showed the superiority which the transplanted ones exhibited. Professor Bailey does not attempt to give the reason for this behavior, although he had observed it before, and other experimenters have reported similar results. He considers it sufficient for his present purpose to say that it appears to be better to sow Lettuce under common conditions and then transplant the seedlings under the light after they are well established.

The extremity of the light compartment was forty feet away from the lamp and the roof is low, so that much of the light was reflected from it, and yet at this distance, where there was nothing but diffused light, the plants were much better than in the unlighted house. The experiment was repeated with second and third crops of Lettuce and with several varieties with similar results. On one bench Radishes had been planted among the Lettuce and the interception of the light by the Radish-leaves had a marked effect on the Lettuce-plants which stood behind them, that is, these shaded plants were much smaller than those fully exposed to the light. When the Radishes were removed the shadows of the Radish-leaves could be traced on the Lettuce, and the same result was seen where the shadow of a rafter lay across the plants.

In the earlier experiments Radishes under the naked light were uniformly injured, and when the light was protected by an opal globe injury was still apparent, although it was decreased, that is, the tubers lost only from one to five per cent. in weight, while the weight of the leaves was increased. This year, under light which was strained through both a globe and a glass roof, there was an increase both in the tubers and in the tops. The best results were obtained from the sash directly under the light, where the tubers were more and larger and the tops were less. In no cases, however, have Radishes been sufficiently benefited to pay for the cost of the light.

Early Egyptian Beets were sown in the lighted and unlighted houses, and a month later, after 160 hours of electric light, the Beets in the lighted compartment were one-third larger than the others. Five months after sowing it was found that fifty-seven per cent. of the plants gave marketable tubers against only thirty-three per cent. of those in the dark house, and the total average weight of the plants in the light was about one-half an ounce greater than the weight of those in the dark house. The test of Beets, however, was not a decisive one, because the plants in the dark house received more bottom-heat than the others.

Last year, under the naked light, Spinach ran directly to seed, while plants in the unlighted beds made good edible leaves. In the present experiment, a month after the light had been shining an average of five hours a night, all the Spinach in the lighted house was ten to fifteen per cent. larger than in the unlighted beds, and there seemed to be no greater disposition to run to seed in the one case than in the other. This advantage was maintained throughout the experiment. The result was unexpected since in the first experiment this crop was very much injured by the light. This test seems to indicate that two panes of glass between the light and the plants have a remarkable influence.

Of Cauliflower it is sufficient to say that under the light they tended to grow taller than in ordinary conditions, but they made fewer and smaller heads.

One hundred Violets were set in beds a few days before the light was started, twelve to sixteen feet from the lamp. Fifty plants were covered every night with a black enameled cloth box, while provision was made for giving them ventilation, and fifty others received the light. In three weeks after the light was started the exposed plants began to bloom, while no buds could be found on the darkened bed. It was not until five weeks after the starting of the light that a flower appeared on the darkened plants, while the others continued to bloom. Twenty-five strong plants of the Daisy (Bellis perennis) were placed fifteen to twenty feet from the lamp, where the light was rather weak. Twenty-five others were placed in an unlighted house. In the first lot, flowers appeared four weeks after starting the light, and for a month or six weeks thereafter these plants bloomed more profusely. At that time the dark-house plants began to surpass the others in the number and size of their flowers and the vigor of the plants. In other words, the lighted plants bloomed earlier, and never made such a stocky growth, and soon exhausted themselves. It is possible that they might have endured longer if they had been established in beds for a longer time before the light was put upon them.

Most interesting were the observations as to the time when plants make their growth. It has been held that plants grow chiefly at night, when they use the material which they have manufactured during the hours of sunlight. It was natural, therefore, to inquire when the lighted plants grew, and whether they grew more rapidly during their fewer hours of darkness, or whether they grew when the light was burning. By careful measurement and record it was found that Lettuce-plants grew about as much under normal conditions in daylight as in darkness, and the periodicity of growth was very irregular. The leaves of the Lettuce grew more rapidly in the lighted house for the first week or so, after which their growth became greater in the dark house—that is, the leaves matured more quickly under the light. The records show that the electric light did not determine periodicity of growth; that increase under the light occurred only during the first days, and that growth in both houses took place in daylight as well as in darkness.

Professor Bailey's first bulletin concluded with these words:

"On the whole I am inclined to Siemens' view that there is a future for electro-horticulture." The final statement in the present bulletin is: "I am convinced that the electric light can be used to advantage in the forcing of some plants."

Notes.

Mr. S. C. Moon writes to the *Farm Journal* that the choicest and best of the early Pears with which he is acquainted is Beurre Giffard. The tree grows feebly while young, and does not bear early, so that the best way to get this fruit is to top-graft cions of it on some old and thrifty tree of an unprofitable kind. They will then grow rapidly and in a few years bear abundantly.

Mr. James MacPherson writes us that Lilium Wallichium superbum has lived out for two winters with him in Trenton, New Jersey, planted on a steep bank and protected with a little litter. The bulb was set nine inches deep and did not flower the first summer although it formed buds. It commenced to grow this year early in May and produced two splendid flowers about the first of August. They were much larger than any of the longiflorum type, an old-gold color inside with dark brown anthers and a texture so durable that the flowers kept perfectly for ten days.

In a review of the Rose exhibitions of the year in England a correspondent of the London *Garden* says that the most successful exhibition Roses were old and well-tried favorites, the best among the hybrid perpetuals being A. K. Williams, Charles Le Febvre, Victor Hugo, Marie Baumann, Mrs. John Laing, Gustav Piganeau, Horace Vernet and Her Majesty. In the Tea class, Edith Gifford, Madame Cuisin, Innocente Pirola, Souvenir d'Elise, Comtesse Madaillac, Francisca Cruger, Maréchal Niel, Madame Hoste, Climbing Niphetos, Madame De Watteville, Ernest Metz, the Bride, Marie Van Houtte and Cleopatra.

Many of the Hickories of northern New Jersey are losing their leaves early on account of the attack of a fungus, Phyllosticta caryigena. In many cases trees were observed whose foliage was quite brown by the middle of September, while neighboring trees looked fresh and green. In one group of three Hickories, on one of which the foliage seemed quite dead, the trees on either side of it, and so close to it that their branches touched, seemed entirely intact. The explanation of this can only be that some individual Hickories are more susceptible to the attack of this fungus than others, and this is true of many other plants and many other fungi.

The October number of *Meehans' Monthly* contains a good picture of the Queen of the Prairie, Spiræa lobata, and in his account of the plant the editor calls attention to the fact that this plant affords a good illustration of the remarkable relationship between the Atlantic flora of North America and the flora of eastern Asia, a relationship to which the attention of men of science was specially called by Professor Gray. In many cases precisely the same species are found in both places, while in other cases the species, though differing, are so closely related that their differences are scarcely to be noted. Spiræa palmata, of Japan, so nearly resembles this Queen of the Prairie that a casual observer would pronounce them the same species, although a critical examination shows good botanical distinctions.

According to the *Kew Bulletin*, a tea made from a species of Orchid has been drunk for some fifty years in France, and, although it is an expensive luxury, finds an ever-increasing sale. It is prepared from Angræcum fragrans, a species allied to the Vanilla-plant, which has a strong aromatic odor. The leaves and stalks are simply dried, without any application of heat; and, to make the tea, a small quantity of them is placed in a closed vessel filled with cold water, and boiled for ten minutes. As with ordinary tea, milk, sugar or rum may be added to this decoction or not, according to taste, and it is said to be equally agreeable whether drunk cold or hot. Material sufficient to furnish fifty cups costs about fifty cents, and its name in Paris, as in Mauritius, whence the custom of using it is said to have come, is "Faham."

We have received from Mr. Curtis A. Perry, of Braintree, Massachusetts, specimens of what seems to be a double-flowered Morning Glory (Ipomœa purpurea). The leaves are heart-shaped and almost as large as those of Aristolochia Sipho. The flowers are very much doubled, of a blush white color streaked with a purplish blue. Mr. Perry writes that the plant is now profusely covered with these flowers, which stand out well beyond the leaves and make a charming sight. The seeds were brought from Mexico three years ago, and seeds from the plant then grown have produced plants each year since, in which the flowers are true to their double character. Each year the plant has begun to bloom out-of-doors in September, but it flourished well as a pot-plant last winter in an ordinary furnace-heated house. Altogether it is a most interesting plant and promises to be a valuable one.

We have received the first number of *Gardening*, a semi-monthly paper published in Chicago, which, according to its announcement, is "gotten up with the view of aiding every one who is interested in a garden." The editor is Mr. William Falconer, who is widely known as a well-equipped writer on horticultural subjects, and who has been for many years head-gardener at Dosoris, Mr. Dana's beautiful country-place on Long Island, which has been more than once described in these columns. Notes from the ornamental and useful plantations of Dosoris will be a prominent feature of the new paper. Mrs. Royle, better known by her maiden name of Emily Louise Taplin, who is also an experienced writer, is a member of the editorial staff and will be permanently located at the Chicago office. The paper resembles the *American Florist* in size and appearance, and the first number contains eleven pages of well-prepared reading-matter.

A correspondent inquires whether the bulbs of Hyacinths which have bloomed in the house in winter can be used another season. The answer depends on how the flowers are grown. If they have been flowered in water the bulbs will be useless for the future. If, however, a bulb is planted in good potting soil, and the spike is cut off after the flowers have faded, the plant, if kept properly watered, will continue to live, and the roots and leaves will store up enough plant-food in the bulb for use another year. By the way, Hyacinth-bulbs and other Dutch bulbs which are needed for early flowering should be planted at once and put in a dark place, or left out-of-doors and covered up with soil or leaves until the roots have started. They should not be brought to the light for five or six weeks, and it will not hurt them to be frozen a little. In planting leave the neck of the bulb uncovered and have the earth firmly pressed about it.

The *Gardeners' Chronicle* for September 17th quotes at length, and with elaborate comment, Bulletin No. 41 of the Cornell Experiment Station on the "Comparative Merits of Steam and Hot-water Heating for Greenhouses," at the close of which we find the following editorial comment: "Incidentally, we may note the fact that the report which has formed the subject of our comment is itself founded upon a thesis prepared for a Bachelor's Degree by Mr. F. W. Card, at present a Fellow in Horticulture. Imagine a student of Oxford, Cambridge, and even London, writing a thesis on steam boilers for a Degree of Horticulture! Our American friends are a long way ahead of us in these matters, and while we gardeners are moaning over a low rate of wages, the overabundant supply of gardeners and inadequate social status, the Americans are extending the bounds of horticultural science, supplying a more thorough education, recognizing talent by means of university degrees, and thus, while raising the whole standard of efficiency, they are lifting the gardener to the position he ought to occupy."

About ten years ago, some three acres of land in this city, along the East River between Eighty-fourth and Eighty-sixth Streets, which had been a sort of beer-garden or picnic-grounds, were taken by the city and called East River Park. Under the Small Parks Act last winter, seven acres were added to this, which extended the water-front of the park to Ninetieth Street. Behind the park is a very dense population, and before it is deep water, which rushes through a narrow channel and always brings with it a cool breeze. The portion just added, and which is connected with the lower part by two bridges which span Eighty-sixth Street, was once an old homestead, and the house, a century old with broad piazzas, is left standing. There are some good trees on the grounds, among them an immense Button-ball, probably the largest on Manhattan Island. The plans for the improvement of this park have been adopted, and the Department is actively at work in making it ready, and it will be completed probably next year. No carriage-roads are provided, but there are playgrounds and grass and shade, and from the high bluff above the river the views to the north and east over the water are superb. Altogether it is a wonderfully attractive spot, and for its size it will be one of the most useful pleasure-grounds in the city.